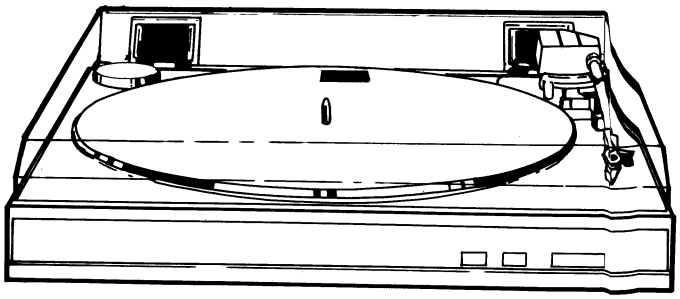
GoldStar

SERVICE MANUAL

BELT DRIVE TURNTABLE

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE "SAFETY PRECAUTIONS", IN THIS MANUAL



MODEL: GSP-309

GoldStar

SAFETY INSTRUCTIONS

These safety instructions are provided to aquaint you with certain warnings and cautions that must be observed for safe and proper operation of this record player.

1. All safety and operating instructions should be read BEFORE the record player is placed in operation. Save all instructions for future reference.
2. The manufacturer, in compliance with the requirements of Underwriters Laboratories, Inc., has placed various warning and caution labels on this record player for your protection. You should adhere to these notices and those in the operating instructions.
3. Do not operate this record player anywhere that is wet with water or moisture or near such items as a bath tub, washbowl, kitchen sink, laundry tub, or near a swimming pool.
4. Do not situate the record player near sources of heat such as stoves, radiators, heat registers, or other appliances that produce heat.
5. The power cord should be connected to a power receptacle of the proper voltage as described in the operating instructions or as noted on the record player. The power cord should be routed so that it will not be pinched by other items, appliances or furniture. Be sure to route the power cord where it will not be walked on. Be sure the power cord plug is fully inserted into the power receptacle and that no part of the prongs are visible.
6. The record player should be cleaned as recommended in the operating instructions. Care should be taken so that no objects fall into the record player enclosure or that no liquids are spilled into the record player.
7. During long periods of non-use the power cord should be un-plugged from the outlet.
8. This record player should be serviced by qualified service personnel when
   a. The power supply cord or plug has been damaged.
   b. Objects have fallen into or liquids have been spilled into the record player.
   c. The record player has been exposed to rain.
   d. The record player does appear to operate not normally or exhibits a marked change in performance.
   e. The record player has been dropped or the enclosure damaged.
9. Do not attempt to service the record player beyond that described in the operating instructions. All other service should be referred to qualified service personnel.

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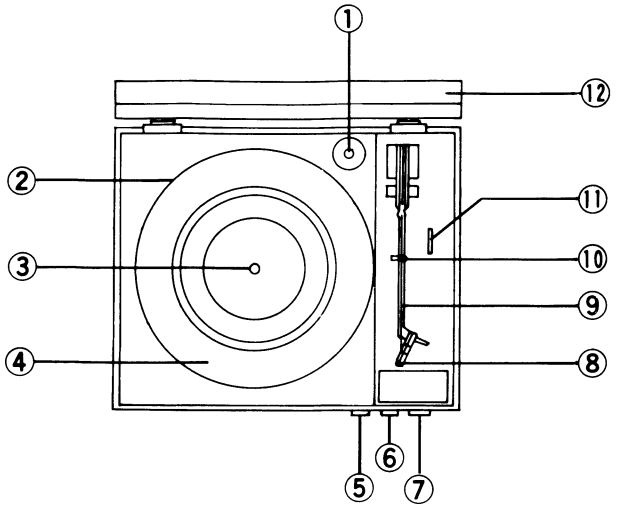
1. DESIGNATION OF PARTS



1. 45 rpm adaptor
2. Platter
3. Center shaft
4. Rubber mat
5. Speed selector (33⅓)
6. Speed selector (45)
7. Reject button
8. Head shell with cartridge
9. Tone arm
10. Arm rest + lock
11. Cueing lever
12. Dust cover

Fig. 1

2. SPECIFICATIONS

Type	Belt drive auto-return system with strobe, speed adjust and cueing.
Turntable speeds	33 1/3 R.P.M. and 45 R.P.M.
Motor	DC E.G motor
Turntable platter	295mm, aluminium die cast.
Tone arm	215mm static balanced fixed weight
Cartridge	AT-3482P
Wow and Flutter	0.1% (JIS WRMS)
Signal/Noise Ratio	50dB (DIN-B)
Power Requirements	220V/50HZ
Dimension	430 (W) x 330 (D) x 105 (H) m/m
Power Consumption	4W
Weight (Net)	3.2Kg
Weight with packing	4.0Kg

3. ADJUSTMENT

SPEED ADJUSTMENT

1. Pitch control range adjustment
   1) Set pitch control knob to its mechanical center.
   2) Select required speed.
   3) Adjust semifix resistor (see Fig. 2) with small minus driver until strobodots look like stopped.
   4) Repeat for second speed.

2. Auto return range adjustment
   1) If tone arm returns to early or does not return at all, adjust the auto return point in the hole located at the right side of tone arm as follows.
   2) Lock tone arm to the arm rest and turn adjust cam (Fig. 3),

      : Counterclockwise = Auto return point will be later and earlier.

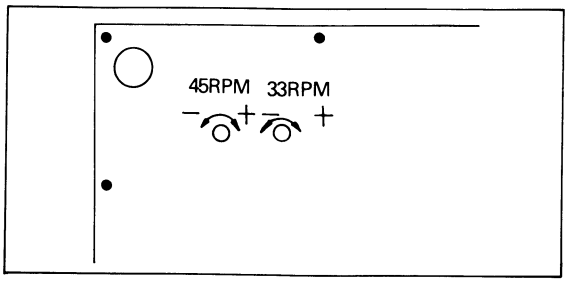


Fig. 2

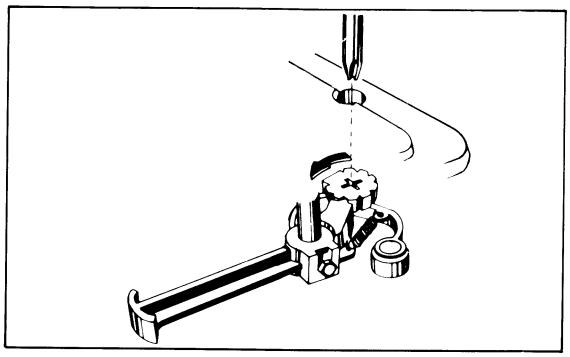


Fig. 3

PICK-UP HEIGHT ADJUSTMENT

All models include AUTOMATIC RETURN at the end of a record, actuated by levers and cams.
The distance between pickup stylus and top surface of a single record in the arm return mode is typically 5/ 32 inch (4-10mm).
Adjustment of this elevation is accomplished by means of cam screw (see Fig. 4)

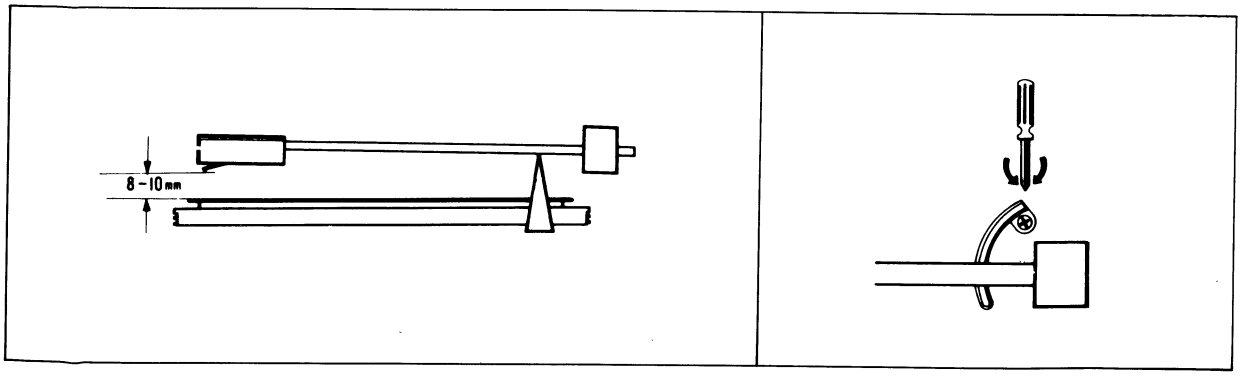


Fig. 4

CARTRIDGE INSTALLATION

1. A cartridge is not generally supplied as part of these turntables, so that the customer has complete choice of cartridge brand.
2. Suitable cartridges are any standard T 4 P type (Moving Magnetic) T4P
3. Read instruction supplied with cartridge throughly before proceeding.
4. Refer to Fig. 5

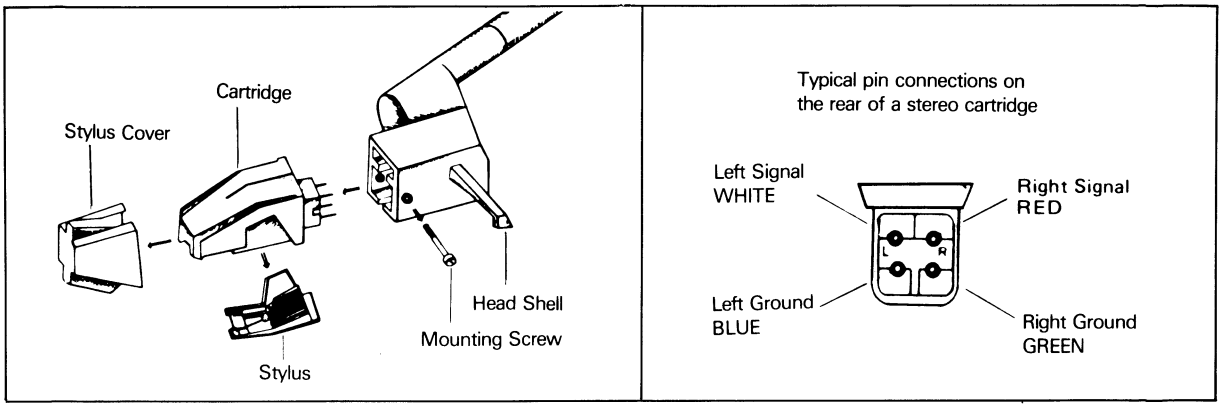


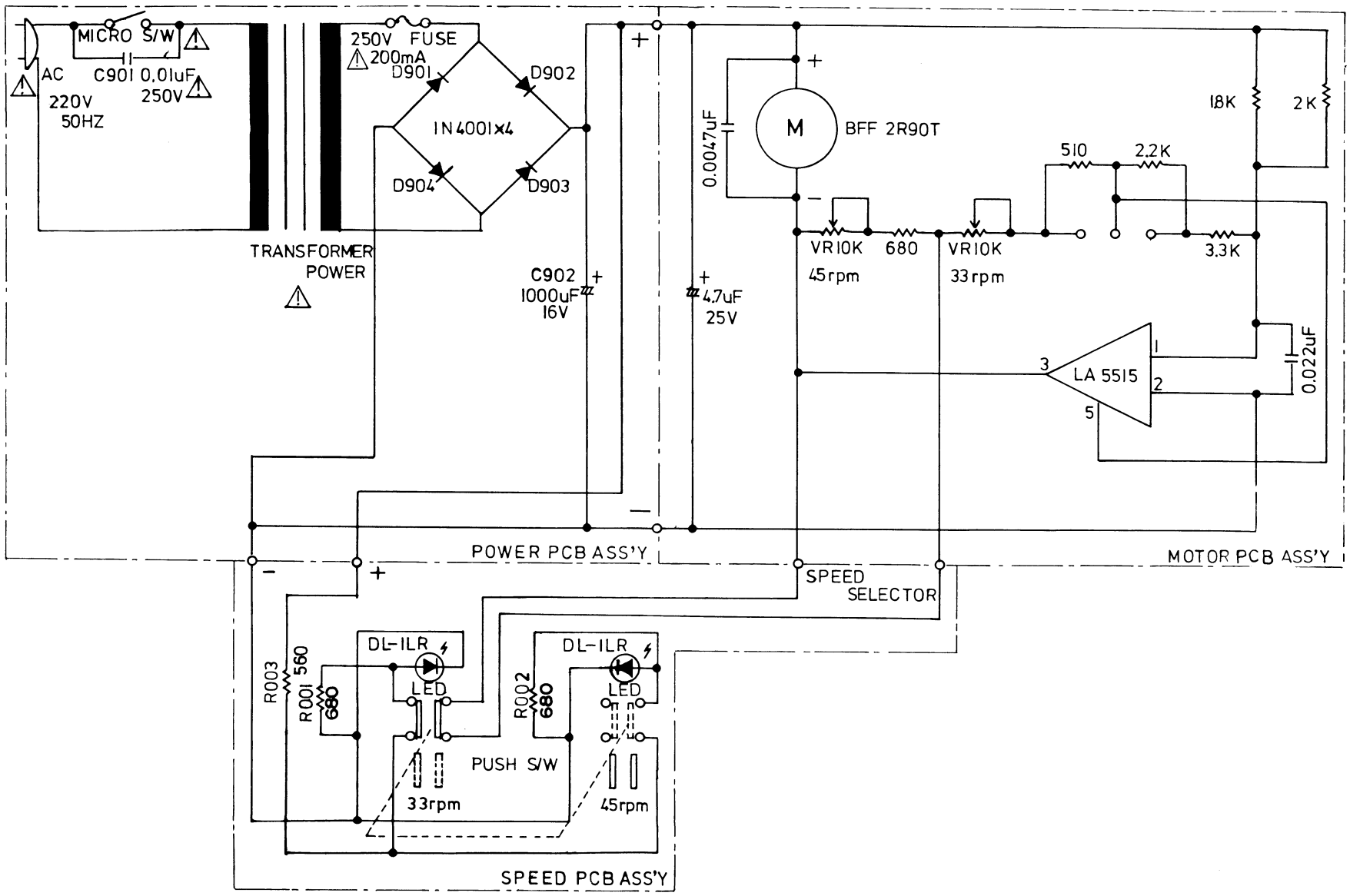
Fig. 5

4. TROUBLESHOOTING GUIDE

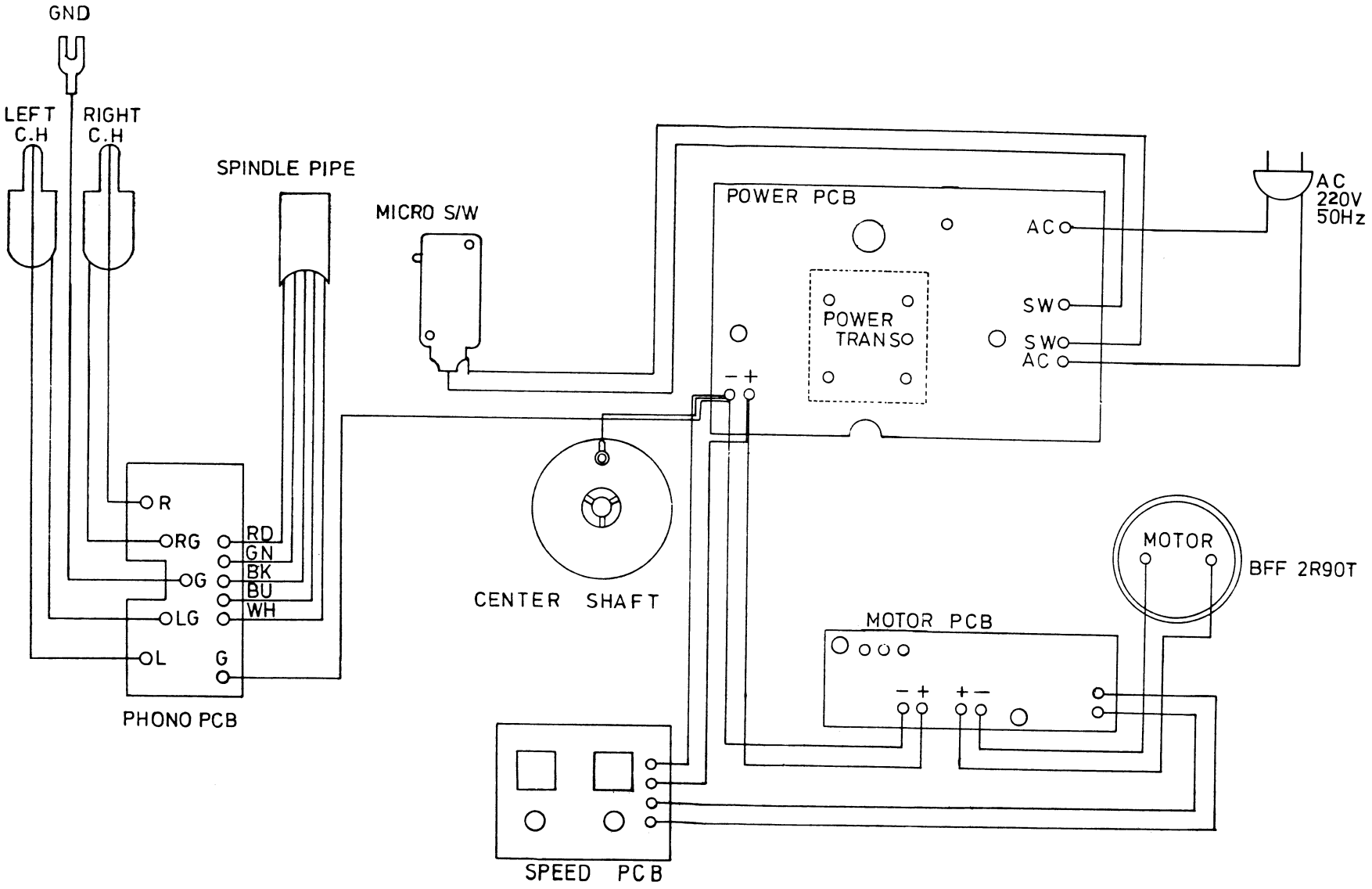
NO	FAULT	CAUSE	CORRECTION
1	Turntable Speed	1) No voltage to turntable	Check power supply outlet. Check power cord and power fuse in electronic controlled models.
	a) Will not start: Nos. 1, 2, 3, 4, 6, 7, 8 and 9	2) Motor bearings binding or frozen.	Check assembly for mechanical damage. Repair, lubricate or replace as indicated.
		3) Fuse open in electronic models. 4) Drive belt defective or missing.	Replace fuse. Determine cause of defect and correct. Replace belt.
	b) Turns slow: Nos. 2, 4, 5, 7, and 10	5) Oil on belt.	Determine cause of oil, clean or replace belt.
		6) Motor winding open.	Winding DC resistance of motor approx. 40 ohms.
	c) Turns fast: Nos. 7, and 10	7) Circuit defect in electronic control models.	Troubleshoot and repair. Refer to circuit Diagram
	d) Speed changes without apparent cause: Nos. 2, 4, 5, 7, and 11	8) Defective switch.	Replace switch.
		9) Wrong supply voltage.	Check input supply rating on turntable. Correct supply voltage condition.
		10) Speed control "trim pots" improperly adjusted	Set speed control knobs to center of range. Set turntable into operation. Adjust trim pots VR (33 1/3) and VR (45) so that marks on turntable stroboscope appear to stand still. Switch 33/45 lever to the appropriate position.
		11) Two or more records on turntable, one record warped.	Remove Warped record.

NO	FAULT	CAUSE	CORRECTION
	Pick-up Height a) Arm does not lift of record on return cycle: b) Arm lifter (cueing control) does not lift arm: Nos. 1, 2, and 3. c) Insufficient or excessive lift: Nos. 1, 2, and 3. Pickup lowering position	1) Worn or damaged cams or levers.	Inspect for worn or damaged parts. Replace and lubricate as required.
		2) Bent or damaged components.	Repair or replace.
		3) Improper lift adjustment.	Inspect for damaged or missing parts. Repair, replace and relubricate as necessary.
		Arm lowering mechanism damaged or binding.	Inspect to determine cause of damage, replace parts as required, Relubricate.
	Abnormal Sound a) Excessive noise: Nos. 1, 2,and 3. b) Sound is distorted. Nos. 2, 3, 4 and 5. c) Intermittent sound: Nos. 2, 3, 4, and 7 d) No sound: Nos. 7,and 8.	1) Ground lead is not connected	Connect properly to the amplifier's ground terminal.
		2) Dust or dirt has collected on the stylus tip.	Clean the stylus tip with a soft brush.
		3) Dust or dirt has collected on the record.	Clean the record with a good quality cleaner.
		4) Stylus is worn.	Replace with new stylus.
		5) Amplifier tone controls set too high.	Set tone controls to lower position.
		6) Record is scratched or warped.	Replace record.
		7) Phono cables are not connected properly.	Connect cables securely to the PHONO input jacks on the amplifier (See OPERATING MANUAL)
		8) Amplifier is not being operated properly (Function tape monitor switch, speaker switches, etc. are not set correctly)	Read the operating instructions that come with your amplifier.

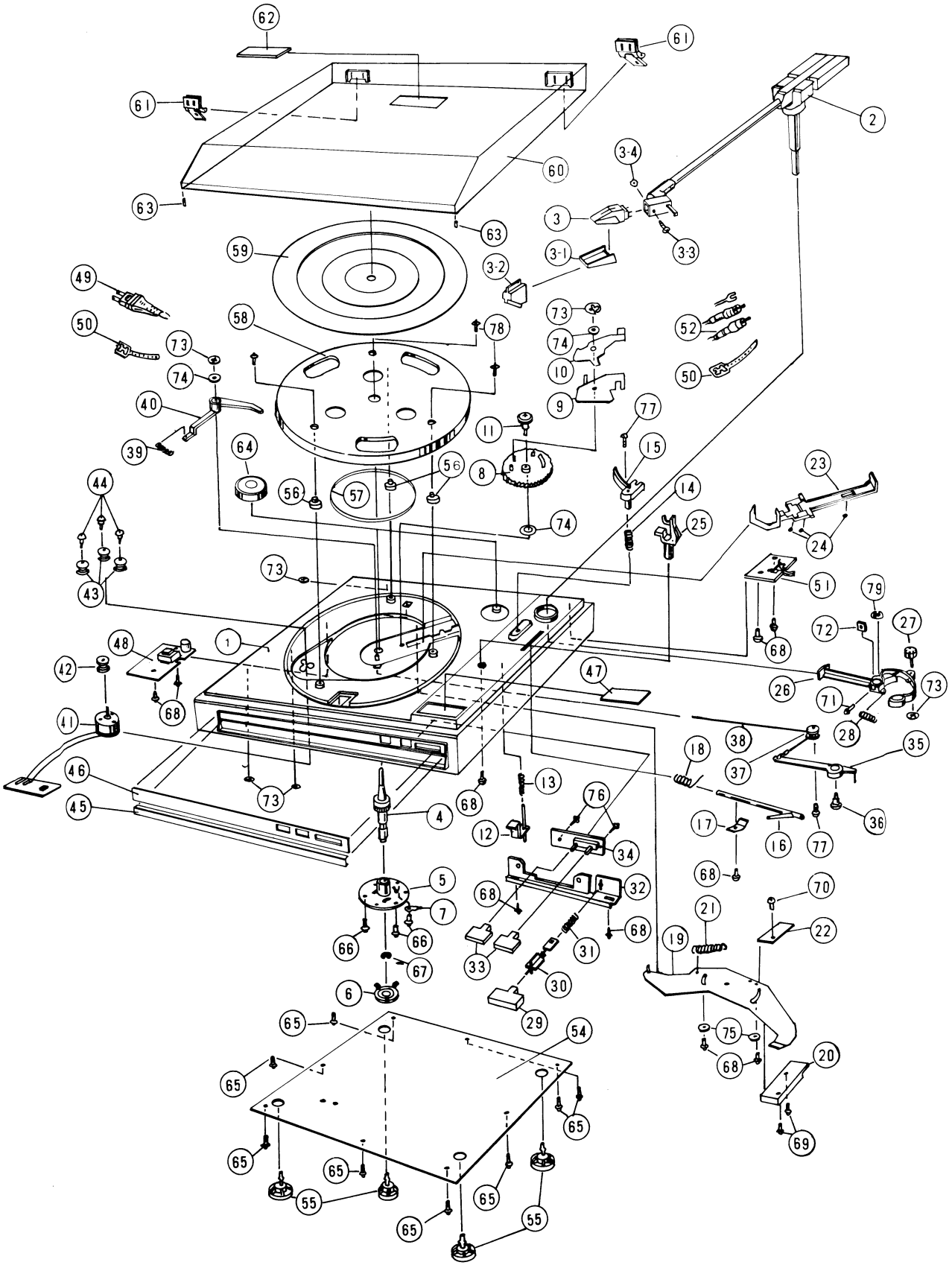
5. SCHEMATIC DIAGRAM



6. WIRING DIAGRAM AND PARTS LIST



7. EXPLODED VIEW

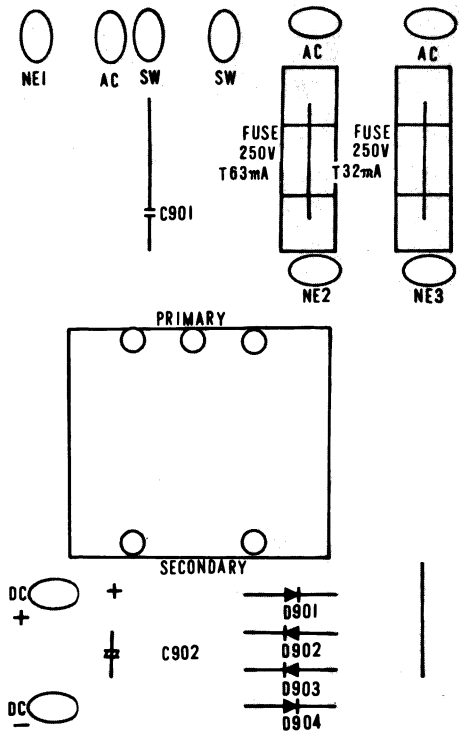


8. MECHANICAL PARTS LIST

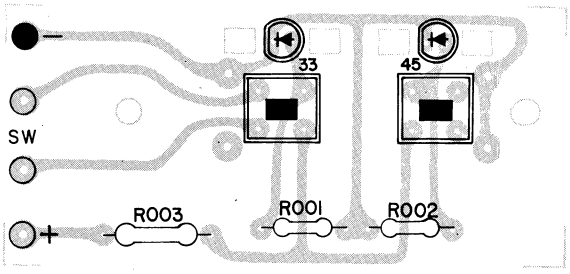
NO.	DESCRIPTION	PART NO.	Q'TY	NO.	DESCRIPTION	PART NO.	Q'TY
1	CABINET-UPPER	213M032A	1	41	MOTOR ASS'Y	414M007A	1
2	TONEARM ASS'Y	552M020A	1	42	PULLEY-MOTOR	432M011A	1
3	CARTRIDGE ASS'Y	526M009A	1	43	CUSHION-MOTOR	447M029A	3
3-1	STYLUS	526M003A	1	44	SCREW-MOTOR SETTING	353M017A	3
3-2	CAP-STYLUS	526M004A	1	45	DECO. PLATE FRONT	251M016A	1
3-3	SCREW-CARTRIDGE	351M002A	1	46	PLATE-FRONT	256M010A	1
3-4	NUT-HEX	352M009A	1	47	TOP-PLATE	251M017A	1
4	CENTER SHAFT ASS'Y	423M025A	1	48	POWER PCB ASS'Y	513M020A	1
5	BRACKET ASS'Y-CENTER	321M019A	1	49	CORD-POWER	682-002A	1
6	CAP-SHAFT	276M010A	1	50	BAND	328M005A	2
7	TERMINAL-GROUND	563M008A	1	51	PCB-PHONO	513M013A	1
8	RING GEAR	435M001A	1	52	CORD-PHONO	682M008A	1
9	CLUTCH-GUIDE	337M002A	1	53	COVER-BOTTOM	221M033A	1
10	CLUTCH-PLATE	337M001A	1	54	FOOT-RUBBER	477M005A	4
11	SHAFT-RING GEAR	423M024A	1	55	PILLER-PLATTER	413M004A	3
12	ELEVATOR	423M027A	1	56	BELT	451M008A	1
13	SPRING-ELEVATION	442M054A	1	57	PLATTER	413M003A	1
14	SPRING-ADJUST	442M055A	1	58	SHEET-RUBBER	231M004A	1
15	ARM-ELEVATION	423M028A	1	59	COVER-DUST	448M004A	1
16	HANDLE-LIFTER	261M005A	1	60	HINGE ASS'Y	395M014A	2
17	HOLDER-LEVER	261M006A	1	61	MARK GS	241M002A	1
18	SPRING-DAMPER	442M053A	1	62	CUSHION-D/COVER	447M030A	2
19	CONTROL PLATE	254M016A	1	63	ADAPTOR-45 RPM	591M004A	1
20	MICRO SWITCH	558M003A	1	64	SCREW-TAP WPH	TRQ1842J	8
21	SPRING-CONTROL PLATE	442M056A	1	65	SCREW-TAP WPH	TRQ2036J	3
22	HOLDER-CONTROL PLATE	324M029A	1	66	E-RING	WED2200P	1
23	ACTUATING ARM	386M019A	1	67	SCREW-TAP WPH	TRQ1836J	11
24	STEEL BALL	344M004A	3	68	SCREW-PH	MRQ1543J	2
25	ARM STAND ASS'Y	263M003A	1	69	SCREW-PLH	MRQ1826J	1
26	FEED ARM	386M017A	1	70	SCREW-TAP HEX	351M003A	1
27	CAM-ADJUST	374M003A	1	71	NUT-SQUAR	352M010A	1
28	SPRING-FEED ARM	442M052A	1	72	WASHER-CS	354M016A	7
29	KNOB-REJECT	273M042A	1	73	WASHER-PLATE	WPA1088J	4
30	HOLDER-REJECT	324M030A	1	74	WASHER-PLATE	WPA4200J	2
31	SPRING-RETURN	442M057A	1	75	SCREW-PH	MRQ1826J	2
32	BRACKET-SWITCH	321M022A	1	76	SCREW-PH TAP	423M026A	1
33	KNOB-SPEED		2	77	SCREW-WPH TAP	TRQ2244J	3
34	SPEED P.C.B ASS'Y	513M018A	1	78	E-RING	WED3600P	1
35	LEVER-REJECT	333M007A	1				
36	SET SCREW	353M018A	1				
37	ROLLER	434M001A	1				
38	STRING	328M009A	1				
39	SPRING-CLUTCH	442M047A	1				
40	LEVER-CLUTCH	333M005A	1				

9. P.C. BOARD AND WIRING

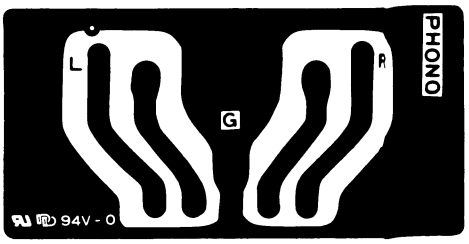
POWER P.C.B (PART NO : 513M012A)



SPEED P.C.B (PART NO.: 513M019A)



PHONO P.C.B (PART NO.: 513M013A)



10. ELECTRICAL PARTS LIST

No.	DESCRIPTION	SPECIFICATION	PART NO.	Q'TY
	P.C.B-POWER ASS'Y (513M020A)			
1	P.C.B-POWER	97x63	513M012A	1
2	TRANS-POWER	BM-8202	641M004A	1
3	C-ELECTROLYTIC	1000μF/16V	CE108C01	1
4	C-POLYESTER-FILM	0.01μF/250V	CPIM001A	1
5	D-RECTIFIER	1N4001	652-005A	4
6	PUSE	250V/T63mA	585-120L	1
7	FUSE	250V/T32mA	585-122L	1
8	FUSE CLIP		586-001C	4
9	TIN WIRE		356M007A	1

NO	DESCRIPTION	SPECIFICATION	PART NO.	Q'TY
	P.C.B-SPEED ASS'Y (513M018A)			
1	P.C.B-SPEED	35x75	513M019A	1
2	SWITCH-PUSH	SUV-20A	555M001A	1
3	R-CARBON FILM	680Ω 1/4W		2
4	R-CARBON FILM	560Ω 1/2W		1
5	LAMP-LED	DL-1LR	582m003A	2
	P.C.B-PHONO ASS'Y			
1	P.C.B-PHONO	30 x 60	513M013A	1
2	CORD-PHONO		682M008A	1
	UPPER CABINET ASS'Y			
1	MOTOR ASS'Y	BFF2R9OT	414M007A	1
2	S/W-MICRO	AH-47008	558M003A	1

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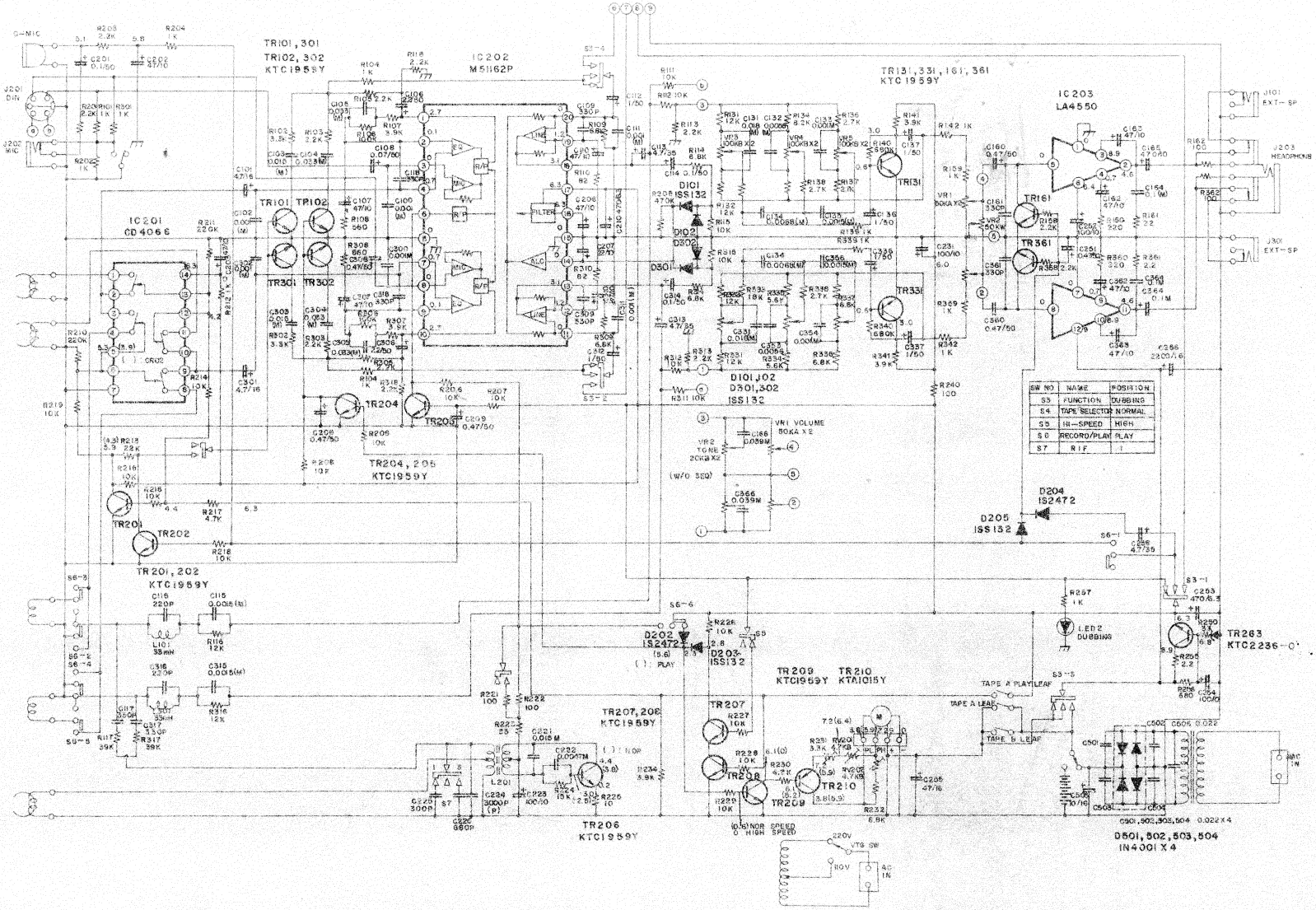
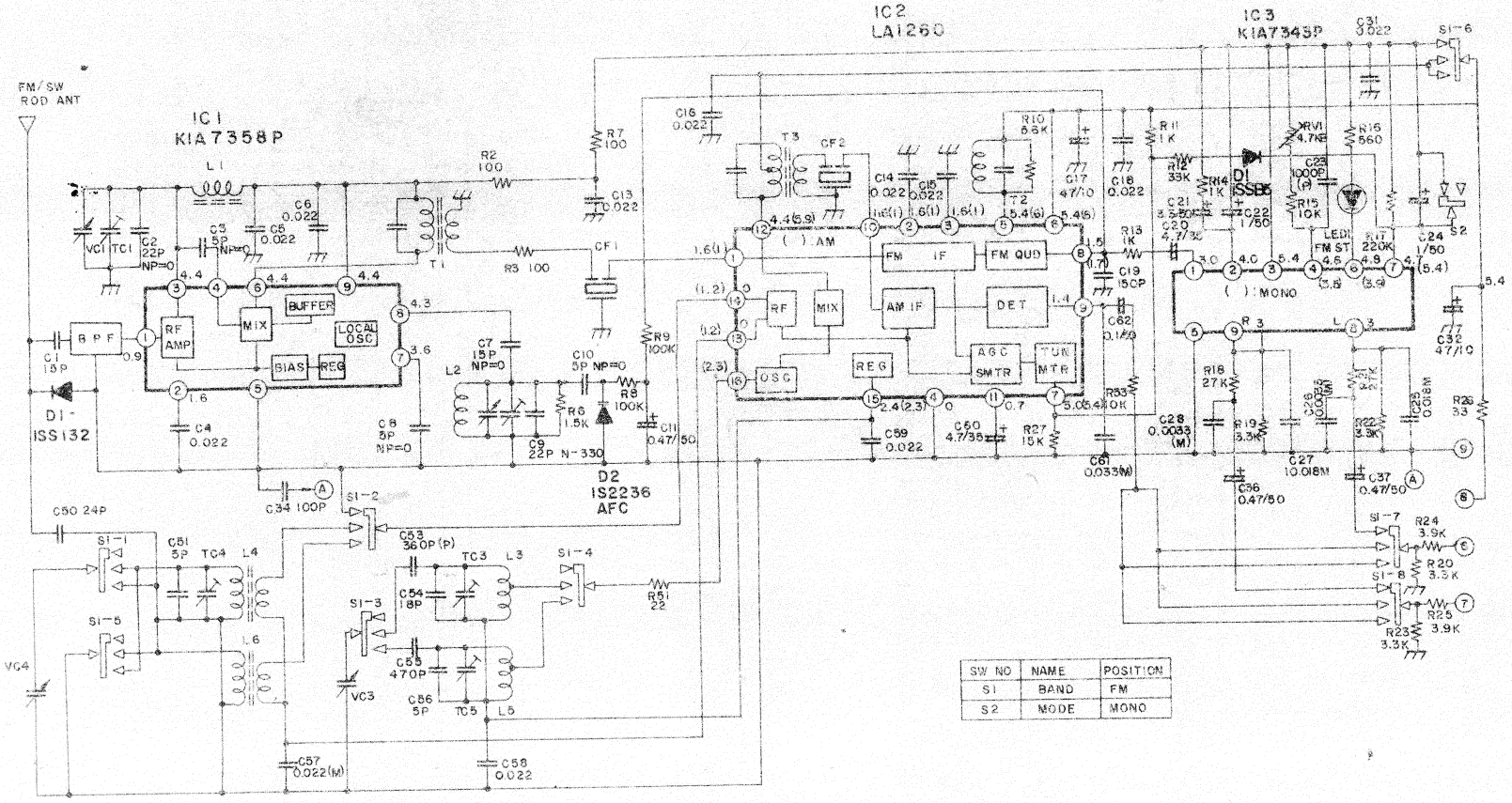


Goldstar TW-PS3



SW NO	NAME	POSITION
S1	BAND	FM
S2	MODE	MONO